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Varieties of Cereal and Oilseed Crops for Alberta - 1988

Prepared by the Cereal and Oilseed Advisory Committee of the Alberta Agriculture Co-ordinating Committee

Explanatory

This publication provides information on individual varieties and indicates cereal and oilseed production areas within the province. Important agronomic characteristics are given in tabular form for varieties of wheat, oats, barley, flax, canola, and rye. The production areas, based primarily upon precipitation and length of growing season, are indicated on the map. With this information farmers can choose varieties that may be best suited to their own particular farming programs. The varieties are tested under medium management conditions and may change their response if tested under very high or very low management.

Yields

The tables show relative yields for six production areas. In area 1, irrigated yields expressed as a per cent of dryland yields are: C.W. Wheat 185, barley 160, oats 180, flax 210, canola 125. In area 2, irrigated yields expressed as a per cent of dryland yields are; C.W. wheat 130, barley 125, oats 120, flax 145, canola 120.

Maturity

The relative classifications refer specifically to the crop being considered. For example, an early-maturing wheat variety could require more days to reach maturity than a late-maturing variety of barley.

In areas 2, 3, and 5 of Alberta the following may be used as a guide for estimating maturity in actual days from seeding to harvest when the crops are seeded on fallow land: Neepawa wheat - 120 days, Park - 116, Grizzly oats - 114, Random - 107, Galt barley - 105, Otal - 94, McGregor flax -130, Noralta - 117, Westar canola - 112, and Tobin - 95 days. In area 6 the longer daylight hours usually reduce the number of days to maturity required. Area 4 has the longest requirement in the province for days to matu.ity. In southern Alberta, Neepawa can be expected to mature in 100 to 105 days and other crops are similarly earlier maturing. The comparisons among varieties within crops, however, tend to remain fairly uniform regardless of where the crops are grown.

Disease, seed treatment

- Seed of rye and flax should be treated to control seedling blight and seed of canola to control flea beetles, seedling blight and the seed-borne phase of black leg.
- Cereal smuts can be controlled with systemic seed treatment fungicides. See Alberta Agriculture publication *Seed Treatment of Cereal and Oilseed Crops* Agdex 100/632.
- Treated seed must not be fed to livestock or poultry or sold for feed. Refer to label for maximum period for storing treated seed. Storage periods for fungicide-insecticide combination products are fairly short. Small quantities of excess seed can be buried. Do not expose treated seed to wildlife!

Good seed

- In relation to total farm input expenses, the cost of GOOD SEED, a most important production factor, is very small.
- The only way to be absolutely sure of obtaining a particular variety is by the use of PEDIGREED SEED.
- Pedigreed seed may be purchased in bulk from authorized suppliers.

Tear out and retain for future reference

The Alberta Cereal and Oilseed Advisory Committee coordinates the findings of the various research institutions in Alberta and in this publication describes those varieties that are suited for production in Alberta. The committee is comprised of representatives from the University of Alberta, Agriculture Canada, Canadian Seed Growers Association, Canadian Seed Trade Association and Alberta Agriculture.

For more detailed information consult your district agriculturist.

COMPARISON OF VARIETIES

WHEAT

Variety	Area (See Map) Irr. 1&2	1	2	3	4	5	6	Relative Maturity	Resistance to: Lodging	Shattering	Loose Smut	Bunt	Common Root Rot
	Yield as % of Neepawa							**ELIGIBLE FOR C.W. RED SPRING WHEAT GRADES**					
Columbus	93	96	99	95	94	101	99	Med-late	Good	Good	Fair	Fair	Fair
Conway	100	97	104	97	99	102	101	Medium	Good	Good	Fair	Fair	Fair
Katepwa	101	101	101	97	100	102	96	Medium	Good	Good	Good	Fair	Fair
Kenyon	101	97	104	97	96	99	97	Medium	Good	Good	Fair	Fair	Fair
Lancer	95	94	98	78	—	—	—	Med-late	Poor	Good	Good	Fair	Fair
Leader	92	94	95	96	—	—	—	Med-late	Good	Good	Fair	Fair	Poor
Neepawa	100	100	100	100	100	100	100	Medium	Good	Good	Good	Fair	Fair
Park	—	—	88	88	87	94	92	Med-early	Good	Good	Good	Fair	Fair
	Yield as % of HY320							**ELIGIBLE FOR CANADA PRAIRIE SPRING WHEAT GRADES**					
HY320	100	100	100	100	100	—	—	V. Late	Good	Good	Poor	Poor	Poor
Oslo	67	75	76	70	82	XX	XX	Medium	Excel.	Good	Poor	Fair	Poor
	Yield as % of Fielder							**ELIGIBLE FOR C.W. SOFT WHITE SPRING WHEAT GRADES**					
Fielder	100	—	—	—	—	—	—	Late	Good	Fair	Poor	Poor	Poor
Owens	107	—	—	—	—	—	—	Late	Fair	Good	Poor	Poor	Good
	Yield as % of Wakooma							**ELIGIBLE FOR C.W. AMBER DURUM WHEAT GRADES**					
Arcola	105	100	98	100	—	—	—	Medium	Good	Good	Fair	Good	Poor
Coulter	104	97	101	99	—	—	—	Medium	Good	Good	Fair	Good	Fair
Kyle	99	110	97	106	—	—	—	Late	Fair	Good	Fair	Good	Fair
Medora	103	100	99	99	—	—	—	Med-late	V. Good	Good	Poor	Good	Fair
Sceptre	106	102	109	106	—	—	—	Medium	V. Good	Good	Poor	Good	Fair
Wakooma	100	100	100	100	—	—	—	Med-late	Fair	Good	Fair	Good	Fair
	Yield as % of Norstar							**ELIGIBLE FOR ALBERTA RED WINTER WHEAT GRADES**					
Norstar	—	100	XX	XX	—	—	—	Early	Fair	Good	Poor	Poor	Fair
Sundance*	—	98	—	—	—	—	—	Early	Poor	Good	Poor	Fair	Fair
Norwin	XX	102	—	—	—	—	—	Early	Fair	Fair	XX	V. Poor	XX

REMARKS: LEADER and LANCER - recommended for sawfly areas only. COLUMBUS - late maturing in Areas 3, 4, 5 and 6. NEEPAWA - difficult to thresh. PARK - subject to head discoloration with yield loss. C.W. Red Spring Wheat grown under irrigation tends to have lower grades. COLUMBUS and LEADER have sprouting resistance. CONWAY and ROBLIN - limited seed supply in 1988. LAURA - no seed available in 1988.

REMARKS: HY320 and Oslo - semi-dwarf varieties, requiring a systemic fungicide seed treatment. HY320 may yield 30% higher than Neepawa. OSLO - less drought tolerant than HY320.

REMARKS: OWENS is the only variety resistant to stripe rust. FIELDER and OWENS - semi-dwarf varieites.

REMARKS: KYLE, MEDORA, WAKOOMA - should be grown only in Area 1 and 2 and the southeastern portion of Area 3 because of late maturity. WAKOOMA yields about 9% more than Neepawa in areas of adaptation.

REMARKS: Varieties listed with winter hardiest at the top. Winter survival is best in southwestern Alberta. Norwin - has very short straw, hardiness about equal to Winalta, erratic yields.

Symbols used in Tables: * Variety may not be described in 1989
— Denotes variety not generally suited to area
XX Denotes no data available

BARLEY

Variety	Area (See Map) Yield % as of Galt: Irr. 1&2	1	2	3	4	5	6	Relative Maturity	No. of Rows	Awn Type	Resistance to: Lodging	Shattering and Neck Break	Loose Smut	False Loose & Covered Smut	Common Root Rot
ELIGIBLE FOR GENERAL PURPOSE GRADES ONLY															
Abee	88	106	101	102	102	104	100	late	2	Rough	Good	Good	Poor	Fair	Fair
Deuce†	99	110	98	99	93	104	93	Medium	2	Rough	Excel	Good	Poor	Good	Good
Diamond	101	104	104	109	105	104	96	Medium	6	Semi-smooth	Good	Fair	Poor	Good	Poor
Empress	94	92	102	106	103	104	97	Medium	6	Rough	Good	Good	Poor	Poor	Fair
Galt	100	100	100	100	100	100	100	Medium	6	Semi-smooth	Good	Fair	Poor	Good	Poor
Heartland	105	103	109	109	110	105	101	Medium	6	Smooth	Good	Fair	Poor	Fair	Fair
Jackson	—	—	—	♠	94	94	94	Early	6	Rough	Good	Good	Poor	Poor	Poor
Johnston	92	106	112	123	107	115	107	Late	6	Smooth	Poor	Good	Poor	Poor	Fair
Leduc	102	99	105	111	103	104	93	Medium	6	Rough	Fair	Good	Fair	Good	Fair
Noble	106	116	107	110	105	103	101	Medium	6	Smooth	Good	Good	Poor	Fair	Poor
Otal	—	—	—	—	85	90	86	Early	6	Rough	Poor	Poor	Poor	Fair	Poor
SEMI-DWARF															
Duke†	117	107	113	107	104	100	99	Late	6	Rough	Excel.	Good	Poor	Fair	Good
Samson	101	94	99	101	99	94	94	Late	6	Rough	Excel.	Good	Poor	Fair	Fair
Winchester†	105	99	105	97	94	91	89	Medium	6	Smooth	Excel.	Good	Poor	Good	Good
HULLESS															
Scout	74	78	77	82	82	82	82	Medium	2	Rough	Fair	Fair	Poor	Poor	Fair
Tupper	87	86	91	90	82	89	85	Medium	6	Rough	Good	Fair	Fair	Poor	Fair
ELIGIBLE FOR MALTING GRADES															
Argyle	91	93	98	106	101	98	94	Medium	6	Smooth	Good	Fair	Good	Poor	Fair
Bonanza	93	93	98	103	98	92	90	Medium	6	Smooth	Good	Fair	Fair	Poor	Fair
Conquest*	87	85	90	96	91	89	81	Medium	6	Smooth	Good	Fair	Fair	Fair	Fair
Ellice	94	97	99	96	95	100	98	Med-late	2	Rough	Good	Good	Fair	Poor	Fair
Harrington	94	98	100	97	96	104	97	Medium	2	Rough	Good	Good	Poor	Poor	Fair
Klages	83	93	93	98	90	102	101	Late	2	Rough	Good	Fair	Poor	Good	Fair

REMARKS: Smuts can be controlled with systemic seed treatment fungicides. DIAMOND, EMPRESS and JOHNSTON have good scald resistance and DUKE, WINCHESTER and LEDUC have superior scald resistance. Semi-dwarfs respond to high levels of management and can yield up to 50 per cent more than Galt. HEARTLAND - resistant to net blotch. DEUCE, DUKE and NOBLE - limited seed supply in 1988. † Denotes only two years of data available.

OATS

Variety	Area (See Map) Yield % as of Cascade: Irr. 1&2	1	2	3	4	5	6	Relative Maturity	Resistance to: Lodging	Shattering	Smuts	Remarks
Athabasca	88	81	83	86	86	84	82	Early	Good	Fair	Poor	Plump kernels
Calibre	104	106	104	97	99	96	97	Late	Good	Good	Poor	Thin hull, plump kernels
Cascade	100	100	100	100	100	100	100	Med-late	Good	Good	Poor	Kernels similar to Random
Dumont	99	102	102	97	93	98	95	V. Late	Fair	Good	Good	Excellent disease resistance
Foothill	91	92	87	89	84	89	86	Late	Good	Good	Poor	Forage variety
Grizzly	97	89	96	90	91	93	90	Late	Fair	Good	Poor	Plump kernels
Harmon	96	91	94	90	87	88	84	Med-late	Good	Good	Fair	Plump kernels, dehulls readily
Jasper	94	91	93	94	88	92	90	Early	Fair	Good	Poor	Thin hull, higher protein
Random	95	94	96	87	88	87	86	Med-early	Good	Good	Poor	Short straw, long large kernels

NOTE: RIEL - seed available, insufficient data to describe. TIBOR, TERRA - hulless, seed supply limited in 1988, insufficient data to describe.

OTHER CEREAL CROPS

SPRING RYE - GAZELLE - only available spring variety and has maturity similar to Neepawa wheat.

OTHER WHEATS - BLUESKY, WILDCAT - eligible for Utility Wheat Grades only, yield 5% - 10% above Neepawa, and maturity similar to Neepawa.

WINTER TRITICALE - DECADE, WINTRI - yield similar to Norstar but 5 - 10% lower winter survival. AURORA - no data available.

Symbols used in tables: * Variety may not be described in 1989. — Denotes variety not well suited to the area.

SPRING TRITICALE

Variety	Area (See Map) Irr. 1&2	1	2	3	4	5	6	Relative Maturity	Resistance to: Lodging	Shattering	Loose Smut	Bunt	Common Root Rot
	Yield as % of Carman							ELIGIBLE FOR SPRING TRITICALE GRADE					
Carman	100	100	100	100	100	—	—	V.late	Good	Good	Good	Good	Poor
Wapiti	111	105	111	109	111	—	—	V.late	Good	Good	Good	Good	Fair

REMARKS: CARMAN, WAPITI - late maturing and should not be grown for seed production in areas 5 and 6. CARMAN - average yield is 10% greater than Neepawa. WAPITI - heavier bushel weight than Carman, limited seed supplies in 1988.

FALL RYE

Variety	Area (See Map) Yield as % of Kodiak in areas Irr. 1&2	1	2	3	4	5	6	Relative Maturity	Test Weight	Straw Strength	Stem Smut
Musketeer	—	122	102	XX	106	103	XX	Early	Good	Good	Good
Cougar	—	98	XX	XX	90	98	99	Late	Good	Good	Poor
Prima	—	125	102	XX	103	107	XX	Late	Good	Fair	Good
Kodiak	—	100	100	XX	100	100	100	Late	Poor	Fair	Good

REMARKS: COUGAR - has shortest straw, susceptible to seedling blight - use of treated seed can improve yields. Stem smut - use systemic fungicides in high risk areas on all varieties. Varieties listed with winter hardiest at the top.

FLAX

Variety	Area (See Map) Yield as % of Noralta in areas Irr. 1&2	1	2	3	4	5	6	Relative Maturity	Seed Size	Rust Resistance
Dufferin	98	96	97	85	95	—	—	Late	Medium	Good
McGregor	113	104	110	110	101	—	—	Late	Medium	Good
Noralta	100	100	100	100	100	100	100	Early	Small	Poor
NorLin	113	98	116	102	105	95	104	Medium	Medium	Good
NorMan	95	93	92	87	104	—	—	Med-late	Medium	Good

REMARKS: VIMY - seed supplies limited in 1988.

CANOLA

Variety	Area (See Map) Yield as % of Tobin in areas Irr. 1&2	1	2	3	4	5	6	Relative Maturity	Straw Length	Remarks
	POLISH TYPE (*B. campestris*)									
Tobin	100	100	100	100	100	100	100	Early	Medium	Mixed yellow and brown seed
	ARGENTINE TYPE (*B. napus*)									
Global	161	—	—	—	—	—	—	Late	V.Long	V.Strong straw
Pivot	153	—	—	—	—	—	—	Late	Long	Strong staw
Tribute	100	93	86	113	92	101	108	Med-late	Long	Triazine resistant
Triton	96	XX	91	99	78	107	91	Late	Long	Triazine resistant
Westar	133	116	124	131	110	154	130	Med-late	Long	

REMARKS: Polish type 2-3 weeks earlier than Argentine type. Argentine type shatter more readily than Polish when ripe, require early seeding in Areas 4,5 and 6. Argentine canola is very risky in Areas 5 and 6 because of late maturity. Mixtures of canola and mustard are inseparable and unacceptable. Triazine resistant varieties have low quality.

Symbols used in Tables: * Variety may not be described in 1989
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XX Denotes no data available

Additional copies of this publication are available from district offices and the Print Media Branch, Alberta Agriculture, 7000 - 113 Street, Edmonton, Alberta, T6H 5T6.